IN THE SPECIFICATION:

Please amend the paragraph beginning at page 5, line 9, as follows.

As previously indicated, a station 110 obtains access to the medium for transmission (e.g., a radio frequency) by deploying an access algorithm 200, shown in FIG. 2. FIG. 2 illustrates a time line 200 for an exemplary access algorithm within the IEEE 802.11 standard. As shown in FIG. 2, the transmitting station 110-t starts sending data at a time 205 After the data has been received correctly by the recipient station 110-r, the recipient station 110-r transmits an ACK message back to the transmitting station 110-t, beginning at a time 215. A Short Inter Frame Space (SIFS) occurs between receipt of the data by the recipient station 110-r and transmitting the ACK message to the transmitting station 110-t. In addition, a Distribute Inter Frame Space (DIFS) is a period that other stations have to defer until they may start transmitting a new message. The start of the new message is deferred with a random back-off period in order to avoid collisions. Thus, a new message from another station may start a random moment within the contention window 225. Depending on the implementation, that other station 110 may start its transmission already a DIFS period after the end of the transmission of station 110-t. Other implementations wait until the end of an ACK, whether it ~~is~~ will be actually transmitted or not. Since the SIFS period is shorter than the DIFS period, it is guaranteed that other stations defer for the ACK message of stations they can observe.

Please amend the paragraph beginning at page 8, line 12, as follows.

If, however, the ACK message or packet header is not correctly received then program control proceeds to step 520, and optionally steps 530 and 540, where energy level, preamble detection and payload detection measurements are evaluated, respectively. The ACK takes many μs, as well as any preamble. The actual measurements for steps 520-540 should already be performed at the beginning of the ACK or packet. They are evaluated or validated as indicated in FIG. 5. A further test is performed during step 550 to determine if a collision has been detected. For example, the collision detection algorithm 500 may employ one or more of

the following rules during step 550 to determine if a collision has been detected:

- o CollisionDetect := (EnergyLevel > CollisionDetectThreshold);
- o CollisionDetect := (EnergyLevel > CollisionDetectThreshold) AND (PayloadDetect);
- o CollisionDetect := (EnergyLevel > CollisionDetectThreshold) AND (PayloadDetect OR PreambleDetect),

where CollisionDetect Flag is a flag that is set during step 560, when appropriate for a detected collision; EnergyLevel is a numerical value determined by the energy level detector 410 representing the energy level; CollisionDetectThreshold is a numerical threshold above which the ~~enegery~~ energy level indicates that another source is transmitting; PayloadDetect is a flag set by the payload detector 600 indicating that a Barker, CCK or OFDM payload has been detected; and PreambleDetect is a flag set by the preamble detector 420 indicating that a preamble of a Barker, CCK or OFDM signal has been detected.

Please amend the paragraph beginning at page 10, line 1, as follows.

FIG. 6A is a schematic diagram of an exemplary payload detector 600 for high bit rate payload transmission ~~is shown~~, for high bit rate carrier detection in the 2.4 GHz band. It is noted that OFDM high-speed modulation is now part of the 2.4 GHz band as well, defined by the IEEE 802.11g standard. The Barker and CCK modulation are also part of this new standard. The Barker preamble detector detects Barker codes. Detector 600 of FIG. 6A detects the CCK signal, while detector 650 of FIG. 6B will detect OFDM. The detector 600 is based on a complex-valued processing filter.

Please amend the paragraph beginning at page 12, line 9, as follows.

The detector 660 comprises an input, an output, a summation unit 654, signal delay units 651, 656, multiplication units 653, 655, and a conjugation unit 652. In the detector 650, the input is connected to the first multiplication unit 653, which ~~is~~ connects to the summation unit 654 and the conjugation unit 652. The input is also connected through a second

line with the first signal delay unit 651. The first signal delay unit 651 connects to the conjugation unit 652. The first multiplication unit 653 further connects to the summation unit 654, which connects to the second multiplication unit 655 and the output 657. The second multiplication unit 655 is also connected with the second signal delay unit 656, which also connects to the output 657.